

REMARKS

Pending Claims:

In this application, claims 1, 6-27, and 34-41 are currently pending. Claims 6-15, 17-27, and 35-41 are unchanged in this response. Claims 1, 16, and 34 are amended by this Response. Claims 2-5 and 28-33 were previously cancelled. Entry of these amendments is respectfully requested.

Rejection under 35 U.S.C. §112: Claims 1 and 16

The Examiner has rejected claims 1 and 16 as being indefinite, since the Fibre Channel ports on the second set of input/output modules lacks antecedent basis. The current claim amendments correct this deficiency, and overcome this §112 rejection.

Rejection under 35 U.S.C. §102(e): Claims 1-27

The Examiner has finally rejected claims 1-27 as being anticipated by Carvey, U.S. Patent No. 6,606,656, with inherent features as evidenced by Dally, U.S. Patent No. 6,370,145. Carvey shows multiple modules (such as fabric routers) connected over a backplane in a multi-module system. Carvey incorporates Dally, which details the construction of a switch router module that can be connected together using the backplanes of Carvey to form a torus network. On February 22, 2005, the Applicant responded to this rejection by noting that Carvey and Dally do not teach the claimed requirement of having two backplanes, each with input/output modules and switch modules, with a direct connection between the input/output modules of one backplane and the switching module of the other backplane. The Applicant noted that in Carvey and Dally, data must pass through the entirety of the first switch router (including both the switch module and an output module) before passing over the backplane and into the input and switch module of the second switch router. In contrast, the present invention allows the data to by-pass the switch module of the first backplane. In so doing, the present invention creates a single, higher port count switch using switch modules that reside on different backplanes, while Dally/Carvey simply uses a backplane to connect multiple switches together in a single fabric.

In the advisory action of March 16, 2005, the Examiner rejected the Applicant's argument, stating that the "issue hangs on both the interpretation of 'direct' and on the indefiniteness of the recitation." The indefiniteness issue was address in the claim

amendments and discussed above. As for the interpretation of "direct connection," the Examiner felt that, as claimed, the term "direct connection" is met by Carvey and Dally in the "electrical paths that electrically connect module connectors of the first set to module connectors of the second set."

In response, the Applicant has now amended the claim to clarify the meaning of the "direct connection" and to explicitly claim the distinction over Carvey. Claim 1 now describes the connection as "bypassing the second set of fabric switch modules." Furthermore, claim 1 states that this connection allows direct connections "without the direct connections passing through any of the second set of fabric switch modules." Similar claim amendments have been made to claim 16. In the combined Dally/Carvey reference, the connections between router modules must pass through the crossbar switch of both switch modules to pass through the system—the connections do not bypass one of the sets of switch modules. Therefore, the prior art does not teach or suggest the type of direct connection specifically claimed in independent claims 1 and 16, and therefore all claims 1 and 6-27 should be considered patentable.

Rejection under 35 U.S.C. §102(e): Claims 34-41

Claims 34-41 were also rejected in light of Dally and Carvey. Independent claim 34 has now been amended in two ways. First, the distinction between input/output modules and switch modules has been clarified. Input/output modules now have a plurality of ports "for receiving communications from outside the switch." Switch modules do not have "any ports for receiving communications from outside the switch" as the switching module receives "communication only from the at least one input/output module." Second, claim 34 has been amended to clarify that the hardwired connection is directly between each input/output module and each switching module within a single chassis "without the hardwired connection passing through any switching module or input/output module." Similarly, the jumper connection also been clarified as a being "from each input/output module and from each switching module directly to at least one jumper connection site without the jumper connection passing through any switching module or input/output module." Thus, the invention as now claims relates to connections between an input/output module and a switch module (as newly distinguished) that do not pass through any switch module or input/output module.

This amended claim is not found in any of the connections found in Carvey. The connections on the backplane of Carvey run from one switch router module (as described by Dally) to another. Each module cannot be considered a switch module as defined in claim 34, as a switch module does not have any ports for external communication. Thus, one must examine the individual components of Dally to meet the requirements of claim 34. When this is done, it is clear that the connections in Carvey do not pass between the input/output modules and the switching modules of Dally without the connections passing through any input/output modules or switching modules. Since nothing in Carvey or Dally suggest the use of the links of Carvey to directly connect the input and outputs of Dally to the crossbar switch of Dally, independent claim 34 and dependent claims 35-41 should be considered patentable over the prior art.

CONCLUSION

All of the claims remaining in this application should now be seen to be in condition for allowance. The prompt issuance of a notice to that effect is solicited.

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